RAW SEQUENCE LISTING

DATE: 01/24/2001

PATENT APPLICATION: US/09/664,225

TIME: 14:37:46

Input Set : A:\ES.txt

Output Set: N:\CRF3\01242001\1664225.raw

ENTERED

```
4 <110> APPLICANT: Hedley, Mary Lynne
             Urban, Robert G.
              Chicz, Roman M.
      8 <120> TITLE OF INVENTION: NUCLEIC ACIDS ENCODING POLYEPITOPE POLYPEPTIDES
     10 <130> FILE REFERENCE: 08191-013001
     12 <140> CURRENT APPLICATION NUMBER: US 09/664,225
C--> 13 <141> CURRENT FILING DATE: 2000-08-18
     15 <150> PRIOR APPLICATION NUMBER: US 60/169,846
     16 <151> PRIOR FILING DATE: 1999-12-09
     18 <150> PRIOR APPLICATION NUMBER: US 60/154,665
     19 <151> PRIOR FILING DATE: 1999-09-16
     21 <160> NUMBER OF SEQ ID NOS: 163
     23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     25 <210> SEQ ID NO: 1
    26 <211> LENGTH: 9
    27 <212> TYPE: PRT
     28 <213> ORGANISM: Homo sapiens
     30 <400> SEQUENCE: 1
    31 Ala Ala Arg Ala Val Phe Leu Ala Leu
    32 1
    34 <210> SEQ ID NO: 2
    35 <211> LENGTH: 8
    36 <212> TYPE: PRT
    37 <213> ORGANISM: Homo sapiens
    39 <400> SEQUENCE: 2
    40 Tyr Arg Pro Arg Pro Arg Arg Tyr
    41 1
    43 <210> SEQ ID NO: 3
    44 <211> LENGTH: 9
    45 <212> TYPE: PRT
    46 <213> ORGANISM: Homo sapiens
    48 <400> SEQUENCE: 3
    49 Glu Ala Asp Pro Thr Gly His Ser Tyr
    50 1
    52 <210> SEQ ID NO: 4
    53 <211> LENGTH: 9
    54 <212> TYPE: PRT
    55 <213> ORGANISM: Homo sapiens
    57 <400> SEQUENCE: 4
    58 Ser Ala Tyr Gly Glu Pro Arg Lys Leu
    59 1
    61 <210> SEQ ID NO: 5
    62 <211> LENGTH: 9
    63 <212> TYPE: PRT
    64 <213> ORGANISM: Homo sapiens
    66 <400> SEQUENCE: 5
    67 Glu Val Asp Pro Ile Gly His Leu Tyr
```

Input Set : A:\ES.txt

Output Set: N:\CRF3\01242001\I664225.raw

```
68
70 <210> SEQ ID NO: 6
71 <211> LENGTH: 9
72 <212> TYPE: PRT
73 <213> ORGANISM: Homo sapiens
75 <400> SEQUENCE: 6
76 Phe Leu Trp Gly Pro Arg Ala Leu Val
77 1
79 <210> SEQ ID NO: 7
80 <211> LENGTH: 7
81 <212> TYPE: PRT
82 <213> ORGANISM: Homo sapiens
84 <400> SEQUENCE: 7
85 Gly Ile Gly Ile Leu Thr Val
88 <210> SEQ ID NO: 8
89 <211> LENGTH: 8
90 <212> TYPE: PRT
91 <213> ORGANISM: Homo sapiens
93 <400> SEQUENCE: 8
94 Ile Leu Thr Val Ile Leu Gly Val
97 <210> SEQ ID NO: 9
98 <211> LENGTH: 9
99 <212> TYPE: PRT
100 <213> ORGANISM: Homo sapiens
102 <400> SEQUENCE: 9
103 Ser Thr Ala Pro Pro Ala His Gly Val
106 <210> SEQ ID NO: 10
107 <211> LENGTH: 9
108 <212> TYPE: PRT
109 <213> ORGANISM: Homo sapiens
111 <400> SEQUENCE: 10
112 Glu Glu Lys Leu Ile Val Val Leu Phe
115 <210> SEQ ID NO: 11
116 <211> LENGTH: 9
117 <212> TYPE: PRT
118 <213> ORGANISM: Homo sapiens
120 <400> SEQUENCE: 11
121 Met Leu Leu Ala Val Leu Tyr Cys Leu
122
124 <210> SEQ ID NO: 12
125 <211> LENGTH: 9
126 <212> TYPE: PRT
127 <213> ORGANISM: Homo sapiens
129 <400> SEQUENCE: 12
130 Ser Glu Ile Trp Arg Asp Ile Asp Phe
```

Input Set : A:\ES.txt

Output Set: N:\CRF3\01242001\1664225.raw

133 <210> SEQ ID NO: 13 134 <211> LENGTH: 9 .135 <212> TYPE: PRT 136 <213> ORGANISM: Homo sapiens 138 <400> SEQUENCE: 13 139 Ala Phe Leu Pro Trp His Arg Leu Phe 140 1 142 <210> SEQ ID NO: 1.4143 <211> LENGTH: 9 144 <212> TYPE: PRT 145 <213> ORGANISM: Homo sapiens 147 <400> SEQUENCE: 14 148 Tyr Met Asn Gly Thr Met Ser Gln Val 149 1 151 <210> SEQ ID NO: 15 152 <211> LENGTH: 9 153 <212> TYPE: PRT 154 <213> ORGANISM: Homo sapiens 156 <400> SEQUENCE: 15 157 Lys Thr Trp Gly Gln Tyr Trp Gln Val 158 1 160 <210> SEQ ID NO: 16 161 <211> LENGTH: 9 162 <212> TYPE: PRT 163 <213> ORGANISM: Homo sapiens 165 <400> SEQUENCE: 16 166 Ile Thr Asp Gln Val Pro Phe Ser Val 169 <210> SEQ ID NO: 17 170 <211> LENGTH: 9 171 <212> TYPE: PRT 172 <213> ORGANISM: Homo sapiens 174 <400> SEQUENCE: 17 175 Tyr Leu Glu Pro Gly Pro Thr Val Ala 176 1 178 <210> SEQ ID NO: 18 179 <211> LENGTH: 10 180 <212> TYPE: PRT 181 <213> ORGANISM: Homo sapiens 183 <400> SEQUENCE: 18 184 Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu 1 187 <210> SEQ ID NO: 19 188 <211> LENGTH: 10 189 <212> TYPE: PRT 190 <213 > ORGANISM: Homo sapiens 192 <400> SEQUENCE: 19

193 Glu Leu Asn Glu Ala Leu Glu Leu Glu Lys

Input Set : A:\ES.txt

Output Set: N:\CRF3\01242001\I664225.raw

```
194 1
                                          10
196 <210> SEQ ID NO: 20
197 <211> LENGTH: 9
198 <212> TYPE: PRT
199 <213> ORGANISM: Homo sapiens
201 <400> SEQUENCE: 20
202 Ser Thr Pro Pro Pro Gly Thr Arg Val
203 1
205 <210> SEQ ID NO: 21
206 <211> LENGTH: 11
207 <212> TYPE: PRT
208 <213> ORGANISM: Homo sapiens
210 <400> SEQUENCE: 21
211 Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu
214 <210> SEQ ID NO: 22
215 <211> LENGTH: 9
216 <212> TYPE: PRT
217 <213> ORGANISM: Homo sapiens
219 <400> SEQUENCE: 22
220 Leu Leu Gly Arg Asn Ser Phe Glu Val
221 1
223 <210> SEQ ID NO: 23
224 <211> LENGTH: 9
225 <212> TYPE: PRT
226 <213> ORGANISM: Homo sapiens
228 <400> SEQUENCE: 23
229 Arg Met Pro Glu Ala Ala Pro Pro Val
232 <210> SEQ ID NO: 24
233 <211> LENGTH: 9
234 <212> TYPE: PRT
235 <213> ORGANISM: Homo sapiens
237 <400> SEQUENCE: 24
238 Lys Ile Phe Gly Ser Leu Ala Phe Leu
239 1
241 <210> SEQ ID NO: 25
242 <211> LENGTH: 9
243 <212> TYPE: PRT
244 <213> ORGANISM: Homo sapiens
246 <400> SEQUENCE: 25
247 Ile Ile Ser Ala Val Val Gly Ile Leu
248 1
250 <210> SEQ ID NO: 26
251 <211> LENGTH: 9
252 <212> TYPE: PRT
253 <213> ORGANISM: Homo sapiens
255 <400> SEQUENCE: 26
256 Cys Leu Thr Ser Thr Val Gln Leu Val
```

Input Set : A:\ES.txt

Output Set: N:\CRF3\01242001\1664225.raw

```
257 1
259 <210> SEQ ID NO: 27
260 <211> LENGTH: 8
261 <212> TYPE: PRT
262 <213> ORGANISM: Homo sapiens
264 <400> SEQUENCE: 27
265 Tyr Leu Glu Asp Val Arg Leu Val
268 <210> SEQ ID NO: 28
269 <211> LENGTH: 9
270 <212> TYPE: PRT
271 <213> ORGANISM: Homo sapiens
273 <400> SEQUENCE: 28
274 Val Leu Val Lys Ser Pro His Asn Val
277 <210> SEQ ID NO: 29
278 <211> LENGTH: 12
279 <212> TYPE: PRT
280 <213> ORGANISM: Homo sapiens
282 <400> SEQUENCE: 29
283 Arg Phe Arg Glu Leu Val Ser Glu Phe Ser Arg Met
     1
286 <210> SEQ ID NO: 30
287 <211> LENGTH: 10
288 <212> TYPE: PRT
289 <213> ORGANISM: Homo sapiens
291 <400> SEQUENCE: 30
292 Leu Leu Arg Leu Ser Glu Pro Ala Glu Leu
295 <210> SEQ ID NO: 31
296 <211> LENGTH: 9
297 <212> TYPE: PRT
298 <213> ORGANISM: Homo sapiens
300 <400> SEQUENCE: 31
301 Asp Leu Pro Thr Gln Glu Pro Ala Leu
302 1
304 <210> SEQ ID NO: 32
305 <211> LENGTH: 6
306 <212> TYPE: PRT
307 <213> ORGANISM: Homo sapiens
309 <400> SEQUENCE: 32
310 Lys Leu Gln Cys Val Asp
311 1
313 <210> SEQ ID NO: 33
314 <211> LENGTH: 10
315 <212> TYPE: PRT
316 <213> ORGANISM: Homo sapiens
318 <400> SEQUENCE: 33
319 Val Leu Val Ala Ser Arg Gly Arg Ala Val
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/664,225

DATE: 01/24/2001

TIME: 14:37:47

Input Set : A:\ES.txt

Output Set: N:\CRF3\01242001\1664225.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date